

Supplementary Material

Legislative Responsiveness, Urban Growth, and Popular Mobilization: Evidence from Algeria

Abstract

Under what conditions do autocratic legislatures affect the rates of protest mobilization? How do demographic factors, namely urban growth, intersect with legislative responsiveness to explain variations in protest activity? This study aims to explain patterns of protest activity in an autocratic country, Algeria. Drawing on an original dataset of parliamentary questions and protest event data from 2015 to 2021, we analyze the impact of governorate-level responsiveness on variations in protest activity. Our findings show that increased legislative responsiveness to constituents' demands is associated with fewer protests at the governorate-level. We also uncover a nonlinear relationship between urban growth and protest activity. Our study contributes to scholarship on legislative responsiveness in authoritarian contexts, particularly concerning how political and demographic factors may exacerbate or attenuate street-level threats to regimes.

Appendix A. Data Collection and Coding Process

Appendix A.1. Parliamentary Queries

We obtained records of the parliamentary questions posed in the lower house of the Algerian parliament (ANP) from their website. We were able to acquire copies of all questions posed in the 7th (2012-2017) and 8th (2017-2021) legislatures. Records included the name of the legislator who directed the question, the question's summary and date, whether the question was answered, the ministry toward which the question was directed, the governorate of the MP, the party of the MP, and the date of the answer (if any). All records were digitized and translated from Arabic to English by a team of Arabic-speaking research assistants. We also collected legislator-level data (i.e., gender, political affiliation, political experience, quota status, and ideological orientation) from the ANP's website, parliament-monitoring websites, and research centers. We relied on the higher commission of elections data to collect the winners' vote share for the 2012 and 2017 elections. Quantitative data sources were supplemented with qualitative data, mainly analyses of primary sources and legislative documents (i.e., electoral laws, lower chamber by-laws, political parties' electoral programs). The most important source of qualitative data and verification was the official gazette of the Algerian government – *al-Jarīda al-Rasmiyya li-l-Jumhūriyya al-Jazā'iriyya al-Dīmuqrāṭiyya as-Sha'biyya* – commonly known by its acronym JORADP. The publication's french title is "Journal officiel de la République algérienne démocratique et populaire".

We used the Comparative Policy Agendas Project (CAP) coding scheme to create a unique dataset on the policy agenda in Algeria. We slightly modified the list of topics of the comparative agendas categories. For example, we divided the category of Law, Crime, and Family Issues into two: (1) Law and Crime, (2) Women, Child,

and Family. Similarly, we added a category for Corruption, which does not exist in the original codebook (See [Table B.2](#) below for the complete list). Three graduate-level researchers who are fluent in Arabic and French coded the parliamentary data.

We present below additional breakdowns of the parliamentary queries data. In [Table B.3](#), we provide a breakdown of the yearly issue focus of MPs according to this classification system. For additional insight, in [Table B.4](#) we also provide a breakdown by the ministry toward which questions were directed by year.

In [Table B.6](#), we present the data used in our analysis disambiguated by governorate and session, beginning from January 2015 during the 7th session and including the entire 8th session. This table excludes 28 questions posed during this period by MPs representing Algerians residing abroad, of which 20 were posed in the 8th session, and 8 in the 7th. In [Table B.5](#) we provide a yearly breakdown of the query data by governorate.

Appendix A.2. Sample Question and Answer Transcript

Below, we provide a sample of the parliamentary transcript in [Figure A.4](#) as well as an original translation into English. In addition to its illustrative value, this sample also depicts a deputy question, minister response, and deputy reply of a roughly modal length for the records reviewed and coded, which total approximately over 15,000 pages. MP Nora Righi’s initial statement lasted approximately 5 minutes and 50 seconds, and the minister’s response lasted 10 minutes and 10 seconds, then follow by MP Righi’s follow up reply which lasted approximately 63 seconds. Including the President of the Assembly’s statements as chair and brief pauses, the exchange translated in the text below lasted 16 minutes and 18 seconds, not unusual for a single question and answer in the People’s National Assembly. The translated English script begins at the fourth paragraph of the first column, as the first three paragraphs

are the concluding portions of MP Mr. Sadiq Sulaimani (from Annaba, and alluded to several times in the following exchange).

Mr. President (*of the Assembly*): Thank you, Mr. Sadiq Sulaimani. We believe that this is a shared concern, and we hope this project will be completed because the port of Annaba serves an essential and virtually national function. (comments away from microphone)... I know it well, I thank you. Now the floor goes to Mrs. Noura Righi, with question number 167, please proceed.

Madam Nora Righi: I thank you, Mr. President of the Assembly.

Honorable President of the Assembly,

Honorable Ministers,

Representatives of the Media,

Peace be upon you all,

Peace be upon you all (Tamazight).

Your Excellency, Minister of Public Works and Transport, We note with profound appreciation your new methodology in revitalizing the public works and transport sector, your hands-on oversight in the field, and your dedication to overseeing various national projects. While the transport sector stands as the very backbone of economic development and the vital artery driving the wheel of progress, the governorate of Batna - home to more than 1.6 million citizens - endures severe hardship in transportation and a suffocating crisis in transit. My question, therefore, encompasses three pressing concerns:

The first concern centers on the fact that the governorate of Batna was chosen in 2008 among the first governorates to receive a tramway system. The detailed studies were completed, the construction company was selected, and everything stood ready

for the project's launch - only to be frozen at the final moment. This freeze came despite our urgent and pressing need for the system, particularly given our terrain - a nearly flat expanse surrounded by mountains "*in the form of a basin*" (French), which precludes the construction of transportation tunnels or alternative solutions. Despite our vast population, as mentioned, and despite hosting two university complexes, a university hospital, and a new city, the project remains frozen. We implore you, Your Excellency, and through you the Minister of Finance, to lift the freeze on the tramway project - an urgent matter requiring your intervention to lift this burden from our region and bolster its development.

The second concern pertains to the puzzling decision to complete half of the highway entrance at 37 kilometers without registering the second half - specifically, the second section ("*la pénétrante de la deuxième tranche*"). It bears noting that most access points across the nation have had their freezes lifted. The current state of this project - whether it exists or not - offers no resolution.

Thus, we seek your intervention, as was done for the deputy from the wilaya of Annaba, to open the second section of this vital artery (la pénétrante).

The third concern addresses the critical matter of Mostefa Ben-Boulaïd International Airport. This edifice, bearing the name of the father of the Algerian Revolution, boasts one of the finest quality runways in the nation. Yet, despite having entered national service years ago, its flight schedule remains virtually barren - limited to a mere five domestic flights weekly to the capital at inappropriate times, and three international flights weekly to France.

As a citizen of the governorate of Batna, how are we to comprehend this situation? When seeking to travel to Algiers, we face an imposed evening schedule, returning the next day at seven in the morning. Should one have business to conduct, it necessitates two nights' stay, requiring payment not only for the air ticket but also

two nights' hotel accommodation. Meanwhile, residents of neighboring governorates can travel to Algiers in the morning and return the same evening. Consider the governorate of Constantine - they enjoy flights at 11:35, and among six flights arriving in Algiers, they have one at 11:35 and another at 12:35. The latter consistently carries thirty passengers - all from the governorate of Batna. Given the vast expanse of our governorate, how can it be justified that neighboring governorates maintain at least four daily flights to the capital, while all western and southern governorates benefit from daily international flights to France, Turkey, Dubai, and Saudi Arabia?

Our airport has a cargo transport center - 90% complete and built years ago - yet it remains non-operational due to minor technical concerns.

Does not the capital of the proud Aurès, the cradle of the liberation revolution, this governorate of martyrs and noble veterans, not deserve - like the governorate of Annaba - greater attention through enhanced domestic and international flights befitting the name of our symbolic hero, Mostefa Ben-Boulaïd?

Your Excellency, Honorable Minister, We look to your wisdom to expedite resolution of these concerns, knowing well your proven competence and the courage of your decisions in the field. Thank you.

The Minister (*Abdelghani Zaalane*): Thank you, Honorable Deputy Madam Nora Righi for your question.

Mr. President of the National People's Assembly,
Honorable Ladies and Gentlemen Members of the Assembly,
My colleagues in government,
Members of the media,
Peace be upon you once again.

We have followed Madam Nora Righi's question concerning the construction of a

tramway in the governorate of Batna, as well as the intensification of domestic and international flights.

Regarding these matters, I am honored to provide you with the following response: First, regarding the Batna tramway project...indeed, Batna is a historic governorate – the governorate of the Aures - with a population of 1.3 million people. It is an expansive territory characterized by the Aurès mountains on one side, extending into an exceptional steppe region that includes Barika, Azil Abdelkader, Seggana, and other municipalities, and bordering the wilaya of Setif with areas such as Ras El Ayoun and Merouana.

Thus, it is an expansive governorate experiencing development and an industrial fabric that grows day by day, especially concerning the mechanical industry and small and medium enterprises. This dynamic governorate's economic vitality, demands robust transportation infrastructure to fully realize its potential and strengthen its contribution to national development, particularly given its significant university population of over 70,000 students.

The capital of the governorate of Batna today, with this growth and movement that the governorate is experiencing, faces congestion, especially during peak hours, and this situation indeed requires diverse transportation means and the introduction of a tramway. Based on these considerations, His Excellency the President of the Republic approved an allocation for a tramway for Batna. The approved tramway project encompassed a 15.5-kilometer route with 25 planned stations and a fleet of 30 trams. The studies were completely finished, and national and international tenders were announced for the project's implementation on June 21, 2014. The Metro Algiers Enterprise (EIMA) administration began receiving bids, technical and financial evaluations were completed, and construction companies were selected. Unfortunately, it was decided to postpone the project's implementation and cancel the

tender on September 17, 2015, coinciding with the difficult financial circumstances that our country faced, like many other countries.

This was the fate of Batna's tramway, and it was the same for Annaba, and likewise even the companies responsible for construction had been identified in the evaluation - Skikda, Bejaia, Tlemcen, Bechar, Tebessa, Blida, and Djelfa. This was the second batch of cities that were about to begin tramway construction after the first batch which included Algiers, Oran, Constantine, Setif, Sidi Bel Abbes, Mostaganem, and Ouargla. All these governorates today have operational tramways except Mostaganem, where it is being completed.

We were supposed to begin with this second batch as part of our short and medium-term program, but financial circumstances necessitated freezing these projects - not canceling them. While these projects remain fully designed and ready for implementation, we will prioritize their revival - just as we discussed with the Annaba highway access. For Batna, this transportation infrastructure is essential.

Honorable Deputy,

I confirm to you from this platform the state and government's determination, within the framework of His Excellency the President's program, to complete the implementation of all projects aimed at modernizing and improving transportation means, ensuring easier travel conditions for citizens and providing them comfort and well-being, which we will accomplish in parallel with the improvement of the country's financial conditions.

Regarding the intensification of domestic and international flights from Mostefa Ben-Boulaïd Airport in Batna, the number of domestic flights currently scheduled to and from Batna airport is six weekly round-trip flights with a capacity of 572 seats and a load factor of 69%. This means that when operating the aircraft connecting Batna to Algiers, it is filled at a rate of 69% in both directions, which is sufficient to

meet the current demand on this route given the 69% occupancy.

As for international flights from Batna airport, they are scheduled to Marseille, Paris, and Lyon, numbering six flights weekly during the summer period and three flights outside this period, with an average load factor of 65%.

It should be noted that the flight program between Algiers airport and Batna airport is served by six aircraft, including five ATR aircraft and one Boeing 737/800. Regarding international flights, they are served by a 737 Boeing of size...

I have noted the concern you raised about traveling to Algiers in the evening, being forced to stay overnight and pay extra expenses to return the next morning. This concern was raised before our visit to Batna, and we have largely addressed this situation. When we came to Batna at the end of last year on November 6, 2016, citizens raised this issue regarding improving flight scheduling, where citizens could wake up in the morning, board a plane, conduct their business in Algiers, and return in the evening. This request was addressed by Air Algérie following this visit through adjusting the flight schedule to enable citizens to travel between Batna and Algiers during the same day, which was appreciated by users of this route. To be frank, we have arranged it, but not for every day of the week - on Sundays and Mondays at 7:15 from Batna to Algiers to conduct their business and return the same evening at 5:30 to Batna. However, we are in the process of improving until we reach, God willing, coverage for all days of the week.

Similarly, citizens traveling from Algiers to the governorate of Batna on Wednesdays at 8:30 can return the same evening to Algiers at 4:10. The Ministry and the company will continue their work to improve flights to and from Batna airport, and we have made specific promises regarding international flights, which will be within the framework of the aviation protocol agreements with other countries. We will reduce pressure on Algiers and direct flights toward interior cities such as Setif,

Biskra airport, El Oued airport, and Batna airport, and God willing, there will be improvement especially with foreign carriers.

Regarding the final question which wasn't included in our notes but which you mentioned, concerning the remaining section of the... "pénétrante" to Batna, work has begun, unlike Annaba, but it's not connected - it needs about 30 km to reach the East-West highway. While construction in Batna is funded and underway, we still need to complete the connecting section that runs through Bir Chouhada and Souk Naamane in the wilaya of Oum El Bouaghi before it joins the East-West highway in Mila. This completion, God willing, is scheduled within our forthcoming program.

These, then, are my responses to the concerns you have raised, and I hope, God willing, that you find them comprehensive and satisfactory. Thank you for your attention, and peace be upon you and God's mercy and blessings.

Mr. President (*of the assembly*): Thank you, Minister of Public Works and Transport for this information and sufficient clarifications. The floor now goes to Madam Nora Righi...if you have a follow-up comment, please proceed.

Madam Nora Righi: Thank you, Minister, for these responses. In reality, while I posed this question the first time seven months ago, as we say, 'every delay brings its blessing' and, today, you said that a greater gift will be presented to the residents of Batna: the airport problem will be solved, and we'll be able to travel morning and evening, our pilgrims won't have to travel to Constantine but will depart from Batna, and flights will be scheduled to Turkey and Dubai - meaning there will be movement. You also said that the freeze on the tramway project has been lifted. We hope this commitment will bear fruit soon so that the people of Batna can be satisfied and the candle of hope can be rekindled among them, leading them to a

bright future.

Thank you, we are counting on you, Your Excellency the Minister, and we are also counting on the Minister of Finance to lift the freeze on these projects very soon, thus restoring hope to the residents of the governorate of Batna. Thank you.

Mr. President (*of the assembly*): Thank you, Madam Nora Righi. We believe, without a doubt, that this is a shared concern. The floor now goes to Mr. Mohammed Lahizah with question number 151, please proceed.

Appendix A.3. Protest Event Data

The dataset was compiled by Daftar al-Ahwal (DADRI), which is, "an independent non-partisan, non-advocacy, and non-religious, Cairo-based data research institute and fact-tank that designs and generates open-access databases, quantitative sociological indicators, and indexes and aggregates alternative knowledge, history, and archives for historical and contemporary social, political, cultural, and legal issues in Egypt and beyond." The dataset information on protests in Algeria is from January 1, 2015 to the end of December 31, 2021. During this period, 15,522 protest events were recorded, of which 14,220 are considered in our analysis, coinciding with protests until the end of March 2021 – the month after the eighth legislature was dissolved.

The largest number of events, 3,693 protests, occurred in 2018. The dataset contains information on protest activities in all 48 governorates of Algeria. The capital, Algiers, witnessed the largest number of protests on the provincial level by 1,192 events followed by the Oran governorate with 896 protests, and the Tizi Ouzou governorate which witnessed 808 protest activities. The smallest number of protests took place in Naama governorates with a total of 74 followed by the Tissemsilt governorate with 75 protests during the same period.

The dataset relied on the local media sources, mainly online daily and periodical publications. The dataset relies on factual information (i.e., form of protest, dimensions of the incident, the victim and perpetrator, and the material losses resulting from the incident) as reported by the respective journalistic source, and categorical judgments to aggregate demands and grievances were based on the text used in the articles. The data-collection methodology is based on the Data Triangulation and Authentication method where we build an interlocking multi-source information pyramid and the information is verified through different stages of comparison and

evaluation. Collection occurred through a proprietary multi-step process, involving first a comprehensive consultation of several news aggregators, covering online material from the top 41 news publications in Algeria, and then additional rounds of advanced search functions on various search engines to ensure maximally comprehensive coverage of events. One of the primary advantages of this dataset is its ability to capture event data from Arabic-language news sources not considered by the more frequently used Armed Conflict and Event Location Database (ACLED) (Raleigh et al., 2010). As noted in a systematic comparison between various protest event datasets, Clarke (2021) Arabic-language protest data in the region tends to capture spatial and temporal trends more accurately, though it may still suffer from potential bias in under-counting labor events outside the capital or central areas. In the Algerian context, and in this dataset, we consider this to be less of a concern considering the substantial number of labor events, whose distribution relative to other event types does not deviate substantially between major cities and other parts of the country.

The dataset classifies grievances into three main types: economic, political, and social. Economic-based protests were the most common category with 8,287 events taking place between 2015-2021, followed by social protests that account for 5,352 events. There are 1,875 events classified as political protests, the vast majority of which occurred during the Hirak uprising. In Table C.7 below, we provide an additional breakdown of these protests by year and grievance sub-type. The Internal politics/politics events category refers to the modal type of anti-institutional, anti-regime protests that defined Hirak.

Our statistical analysis in our base models includes 3,375 month-governorate units, accounting for the 75 months in our period of interest for each of Algeria’s 48 governorates, except for Illizi, Tindouf, and El Tarf. These governorates are excluded

as they do not contain a single urban centre meeting the UCDB requirements, nor do they contain a single city with a population of 50,000+ by any recent estimate.

Appendix A.4. Codebook

- *Protests* – DADRI: the number of protests in a governorate in a given month. Protests coded using the new governorate scheme introduced in 2019, with the expansion from 48 to 58 governorates, were reassigned to their previous governorate. New governorates were divided congruently from within single, previous governorates.
- *LagDV* – DADRI: the number of *Protests* in a governorate the previous month. For December 2014, authors conducted supplemental data collection following training in DADRI’s methodology.
- *Questions* – Official Parliamentary Records: captures the total number of oral questions submitted by MP’s from a given governorate in a given month_year.
- *QuestionsLog* – Logged value of *Questions* + 1.
- *Local* – Official Parliamentary Records: captures the total number of oral questions submitted by MPs from a given governorate in a given month_year that refers to a local issue. To distinguish between local and non-local queries, we hand-coded the official text of the query for references to the district name in the governorate.
- *LocalLog* – Logged value of *Local* + 1.
- *Questions_{t-x}* – Official Parliamentary Records: Takes the value of *Questions* x months prior to the ordinary lag in our dataset of one month. In [Table F.18](#),

we include models with additional lags of $x = 1$ (two month lag), $x = 2$ (three month lag), and $x = 5$ (six month lag).

- *Local_{t-x}* – Official Parliamentary Records: Takes the value of *Local* x months prior to the ordinary lag in our dataset of one month. In [Table F.18](#), we include models with additional lags of $x = 1$ (two month lag), $x = 2$ (three month lag), and $x = 5$ (six month lag).
- *WilayaPop* – World Pop: Summed value of population in World Pop raster cells within a governorate for previous year.
- *Population* – World Pop: Logged value of *WilayaPop* for inclusion as a control in regression models.
- *UrbanPop* – GHSL-UCDB/World Pop: Summed value of population in World Pop yearly raster cells within the for 2015 temporal layer of the 2024 GHSL-UCDB city polygons for previous year. Given the projection differences between the initial data, pre-processing in QGIS was conducted manually to ensure an accurate reprojection and merge of the files.
- *UrbanShare* – GHSL-UCDB/ World Pop: *UrbanPop* divided by *WilayaPop* for a given governorate from the GHSL-UCDB data ([Rivero et al., 2024](#)), which captures the percentage of governorate population located in urban centers and urban clusters per the GHS-SMOD classification rules. Rounded to the nearest basis point.
- *UrbanGrowth* – GHSL-UCDB/World Pop: Takes the percent change between a given governorate’s *UrbanPop* value from previous and preceding real year.

- *VoterTurnout* – Government Gazette: Codes turnout rate in 2012 for all observations falling during the seventh legislature (prior to June 2017), and the product of the 2017 turnout rate and the valid ballot rate for all observations in June 2017 and onward. Rounded to the nearest basis point.
- *Nightlight* – Mean yearly governorate nighttime light emissions per 100,000 residents (*WilayaPop*) from the previous year. Original image collection and data processing by NASA/NOAA Visible Infrared Imaging Radiometer Suite (VIIRS). We rely specifically on [Li and Zhou \(2017\)](#)’s harmonized version of the [Elvidge et al. \(2021\)](#). Rounded to the nearest hundredth.
- *Islamist* – Government Gazette: takes the proportion of Islamist MPs in the respective month_year’s legislature (using the same June 2017 cutoff date as with *Voter Turnout*) within the total seats allocated to that governorate. Rounded to the nearest basis point.
- *FLN* – Government Gazette: takes the proportion of the FLN MPs in the respective month_year’s legislature (using the same June 2017 cutoff date as with *Voter Turnout*) within the total seats allocated to that governorate. Rounded to the nearest basis point.
- *Massacres* – [Kilavuz et al. \(2023\)](#): takes $\log + 0.1$ of the number of massacres that killed at least ten people from [Kilavuz et al. \(2023\)](#) dataset that draws on Algeria-Watch and [Bedjaoui et al. \(1999\)](#) to measure the impact of massacres during the Algerian civil war on protest behavior during the Hirak period.
- *Repression* – DADRI & Supplemental Data Author Data Collection: Takes the count of all protest events in the previous month that was met with a response from law enforcement or security personnel, recorded in the DADRI data.

- *program_territory* – Government Gazette: refers to the nine programmatic regions used by the Algerian government for administrative and policy planning, and is the lowest level of aggregation for the vast majority of development statistics. These "Espaces de Programmation Territoriale (EPT)" were established by law n. 10-02 on June 29, 2010, and include: Nord-Centre; Nord-Est; Nord-Ouest; Hauts-Plateaux Nord; Hauts-Plateaux Est; Hauts-Plateaux Ouest; Sud-Est; Sud-Ouest; Grand Sud.
- *Hirak* – Covers the months of the initial Hirak mobilization from the anti-Bouteflika demonstrations that began in February 2019, until the COVID-19 lockdowns proclaimed in March 2020, as well the subsequent rounds of mass mobilization that occurred in October 2020, February 2021, and March 2021. The last major anti-regime protest activity in Algeria associated with Hirak occurred in May 2021, two months after the end of our dataset.
- *COVID* – Covers the months of March 2020 to June 2020.

Appendix B. Parliamentary Query Summaries

Table B.2: CAP Issue Area Coding Scheme

No.	Category Title
1	Macroeconomics
2	Civil rights civil issues and minority issues
3	Health
4	Agriculture
5	Labor and Employment
6	Education
7	Environment
8	Energy
9	Immigration/citizenship issues
10	Transportation
11	Women/child/family
12	Law and crime
13	Social welfare
14	Community development and housing issues
15	Banking, finance, domestic commerce
16	Defense
17	Space, science, technology, communications
18	Foreign trade
19	International affairs and foreign aid
20	Government operations/budget
21	Public land and water management
22	Corruption/fact checking
23	Arts and Entertainment
24	Sports and recreation
25	Religion

Table B.3: Questions by CAP Issue and Year

Topic	2015	2016	2017	2018	2019	2020	2021	Total
1. Macroeconomics	0	0	0	3	1	0	0	4
2. Civil rights civil issues and minority issues	5	3	0	4	2	0	0	14
3. Health	21	9	5	51	17	44	0	147
4. Agriculture	10	4	0	20	7	14	0	55
5. Labor and Employment	7	5	0	17	10	18	1	58
6. Education	28	24	6	36	11	30	5	140
7. Environment	7	2	0	12	6	5	0	32
8. Energy	11	2	1	32	9	10	3	68
9. Immigration/citizenship issues	6	1	3	6	3	2	0	21
10. Transportation	32	16	8	50	15	21	1	143
11. Women/child/family*	3	0	1	9	0	5	1	19
12. Law and crime	14	4	1	12	6	4	0	41
13. Social welfare	5	2	0	29	12	13	1	62
14. Community development and housing issues	23	13	6	30	11	14	3	100
15. Banking, finance, domestic commerce	41	15	0	38	17	25	2	138
16. Defense	5	1	1	5	3	8	0	23
17. Space, science, technology, communications	18	2	0	8	5	2	1	36
18. Foreign trade	3	4	1	8	0	2	2	20
19. International affairs and foreign aid	5	0	2	1	0	2	0	10
20. Government operations/budget	15	7	6	33	6	7	3	77
21. Public land and water management	11	1	7	34	17	17	4	91
22. Corruption/fact checking*	2	0	0	2	0	1	0	5
23. Arts and Entertainment	6	4	2	9	3	9	2	35
29. Sports and recreation	6	2	2	16	4	7	2	39
31. Religion	21	4	1	12	4	3	0	45
Total	305	125	53	477	169	263	31	1423

Table B.4: Summary of Parliamentary Questions by Ministry/Year (2015-2021)

Ministry	2015	2016	2017	2018	2019	2020	2021	Total
Agriculture, Rural Development, and Fishing	10	4	1	24	5	14	0	58
Commerce	9	4	0	16	2	4	3	38
Communications	7	1	0	4	3	3	1	19
Culture	6	5	3	13	4	6	2	39
Defense	1	0	0	0	0	0	0	1
Energy	11	2	2	27	7	9	3	61
Environment and Renewable Energy	3	0	2	10	6	1	0	22
Finance	14	12	0	11	8	7	0	52
Fishing and Maritime Products	0	0	0	0	0	4	0	4
Foreign Affairs	6	0	5	4	0	1	0	16
Health, Population and Hospital Reform	18	9	4	53	15	40	0	139
Higher Education and Scientific Research	9	9	3	11	1	7	2	42
Housing, Urban Development, and the City	17	10	6	32	10	11	3	89
Industry and Mines	12	3	0	18	6	10	0	49
Interior and Local Government	27	8	4	39	21	24	0	123
Justice	8	2	2	5	4	4	1	26
Labor, Employment, and Social Security	7	2	1	17	7	8	2	44
Mujahideen (Veterans)	4	0	0	6	4	4	1	19
National Education	16	9	2	23	10	19	3	82
National Solidarity, the Family, and Women's Issues	4	4	0	20	5	7	1	41
Parliamentary Relations	0	1	0	0	0	0	0	1
Post, Telecommunications, Technology, and Digitization	12	3	0	7	3	1	1	27
Prime Minister	32	18	3	27	11	31	0	122
Public Works and Transportation	29	14	9	52	15	21	1	141
Religious Affairs and Endowments	18	3	1	9	3	2	0	36
Statistics and Digitization	0	0	0	0	0	0	0	0
Tourism and Traditional Industry	7	0	1	6	4	4	0	22
Vocational Training and Education	0	0	0	0	1	0	0	1
Water Resources and Water Security	12	1	2	23	11	14	5	68
Youth and Sports	6	1	2	19	3	8	2	41
Total	305	125	53	476	169	264	31	1423

Table B.5: Questions by Governorate and Year

Governorate	2015	2016	2017	2018	2019	2020	2021	Total
Adrar	0	0	0	3	3	0	0	6
Ain Defla	2	1	0	8	4	6	0	21
Ain Temouchent	0	0	0	1	1	3	2	7
Alger	47	13	3	27	12	17	1	120
Annaba	0	0	0	7	0	0	0	7
Batna	2	0	5	29	3	2	0	41
Bechar	5	5	0	6	1	7	1	25
Bejaia	1	1	0	18	7	0	0	27
Biskra	0	0	3	18	5	5	1	32
Blida	4	2	0	11	2	10	1	30
Bordj Bou Arreridj	11	3	1	6	6	21	2	50
Bouira	7	2	0	1	0	0	1	11
Boumerdes	2	4	0	5	1	0	0	12
Chlef	8	6	3	31	8	15	0	71
Constantine	6	3	2	9	4	2	0	26
Djelfa	13	10	4	15	2	17	8	69
El Bayadh	0	0	2	2	1	5	0	10
El Oued	15	5	0	3	0	2	0	25
Ghardaia	0	0	0	2	0	0	0	2
Guelma	1	4	0	13	2	0	0	20
Illizi	14	1	0	8	2	3	0	28
Jijel	6	2	2	27	14	19	0	70
Khenchela	0	0	0	2	0	0	0	2
Laghouat	2	0	0	22	10	8	0	42
Mascara	8	5	2	0	0	0	0	15
Medea	19	1	0	17	13	14	0	64
Mila	4	1	4	6	4	8	0	27
Mostaganem	0	1	0	1	0	0	0	2
Msila	11	2	5	8	2	6	0	34
Naama	0	0	0	3	0	4	3	10
Oran	2	1	0	3	2	0	2	10
Ouargla	11	0	0	1	0	0	1	13
Oum El Bouaghi	0	0	0	2	3	2	0	7
Relizane	2	1	0	8	4	11	1	27
Saida	0	0	0	4	1	0	1	6
Setif	5	1	0	20	9	21	4	60
Sidi Bel Abbes	0	0	0	1	0	1	0	2
Skikda	0	0	3	10	6	2	0	21
Souk Ahras	49	22	6	34	6	11	0	128
Tamanrasset	13	0	1	29	5	9	0	57
Tebessa	6	3	0	5	1	6	2	23
Tiaret	4	7	0	17	10	11	0	49
Tindouf	1	0	0	3	3	0	0	7
Tipaza	12	13	0	2	0	0	0	27
Tissemsilt	0	2	0	16	3	0	0	21
Tizi Ouzou	3	1	0	6	1	7	0	18
Tlemcen	2	2	0	0	6	4	0	14
Total	298	125	46	470	167	259	31	1396

Table B.6: Parliamentary Questions by Governorate and Session

Governorate	7 th	8 th	Total
Adrar	0	6	6
Ain Defla	3	18	21
Ain Temouchent	0	7	7
Alger	61	59	120
Annaba	0	7	7
Batna	2	39	41
Bechar	10	15	25
Bejaia	2	25	27
Biskra	0	32	32
Blida	6	24	30
Bordj Bou Arreridj	15	35	50
Bouira	9	2	11
Boumerdes	6	6	12
Chlef	14	57	71
Constantine	9	17	26
Djelfa	24	45	69
El Bayadh	0	10	10
El Oued	20	5	25
El Tarf	0	0	0
Ghardaia	0	2	2
Guelma	5	15	20
Illizi	15	13	28
Jijel	8	62	70
Khenchela	0	2	2
Laghouat	2	40	42
Mascara	15	0	15
Medea	20	44	64
Mila	5	22	27
Mostaganem	1	1	2
Msila	13	21	34
Naama	0	10	10
Oran	3	7	10
Ouargla	11	2	13
Oum El Bouaghi	0	7	7
Relizane	3	24	27
Saida	0	6	6
Setif	6	54	60
Sidi Bel Abbas	0	2	2
Skikda	0	21	21
Souk Ahras	71	57	128
Tamanrasset	13	44	57
Tebessa	9	14	23
Tiaret	11	38	49
Tindouf	1	6	7
Tipaza	25	2	27
Tissemsilt	2	19	21
Tizi Ouzou	4	14	18
Tlemcen	4	10	14
Total	428	968	1396

Appendix C. Protest Data Summaries

Table C.7: Grievances by Topic & Year

Grievance	2015	2016	2017	2018	2019	2020	2021	Total
Deteriorating work environment	179	876	555	709	448	416	1,391	4,574
Deteriorating services/cost of living	32	199	748	923	363	214	104	2,583
Delay/deduction of financial entitlements	4	30	46	1,253	352	393	395	2,473
Internal politics/political events	16	16	58	23	1,634	22	31	1,800
Housing	48	276	248	301	295	193	128	1,489
Education	25	208	207	345	19	17	39	860
COVID-19	-	-	-	-	-	414	-	414
Imposition of new financial fees	-	39	18	10	3	102	50	222
Low wages	-	-	-	-	-	-	221	221
Unemployment	1	30	24	35	57	30	17	194
Unjust dismissal/transfer	4	31	42	20	21	16	20	154
Other	5	41	16	36	29	9	-	136
Security	5	13	19	14	21	6	56	134
Environment	58	18	7	7	5	9	14	118
Health	7	18	20	16	32	10	3	106
Foreign policy	-	1	31	1	-	3	-	36
Total	384	1,796	2,039	3,693	3,279	1,854	2,469	15,514

Table C.8: Protests by Governorate-Year

Governorate	2015	2016	2017	2018	2019	2020	2021	Total
Adrar	7	19	14	39	45	28	26	178
Ain Defla	64	16	29	48	18	18	13	206
Ain Temouchent	2	13	2	5	17	19	17	75
Alger	18	103	400	177	260	82	47	1087
Annaba	6	70	80	101	96	47	57	457
Batna	11	133	107	103	70	41	24	489
Bechar	2	21	5	161	19	23	13	244
Bejaia	1	40	32	64	63	178	37	415
Biskra	1	50	33	62	46	24	17	233
Blida	12	25	70	103	47	28	17	302
Bordj Bou Arreidj	3	33	60	54	65	40	24	279
Bouira	5	46	117	191	65	74	17	515
Boumerdes	6	49	28	72	49	22	15	241
Chlef	3	28	8	79	27	27	34	206
Constantine	22	106	183	82	113	24	35	565
Djelfa	6	23	62	79	94	44	38	346
El Bayadh	0	14	5	1	70	18	15	123
El Oued	3	24	24	54	39	30	14	188
El Tarf	5	54	15	49	43	46	15	227
Ghardaia	2	12	6	4	20	18	13	75
Guelma	10	39	23	52	54	41	18	237
Illizi	2	18	9	2	10	19	13	73
Jijel	2	34	21	83	60	100	42	342
Khenchela	10	48	26	82	72	56	23	317
Laghouat	3	30	99	88	20	34	14	288
Mascara	2	27	13	40	30	22	15	149
Medea	6	19	10	37	30	22	16	140
Mila	2	20	18	84	52	79	19	274
Mostaganem	1	23	4	168	113	27	23	359
Msila	7	42	38	191	51	80	16	425
Naama	1	12	3	2	11	19	13	61
Oran	18	43	98	252	330	33	61	835
Ouargla	11	51	10	179	92	23	20	386
Oum El Bouaghi	1	50	54	37	39	25	23	229
Relizane	7	43	98	41	96	43	23	351
Saida	9	17	3	3	28	18	13	91
Setif	2	57	96	232	56	68	33	544
Sidi Bel Abbes	4	19	16	51	49	51	68	258
Skikda	5	56	63	78	70	35	26	333
Souk Ahras	9	18	4	10	15	19	18	93
Tamanrasset	47	23	1	37	18	18	13	157
Tebessa	1	28	40	50	40	24	31	214
Tiaret	4	34	20	57	62	43	30	250
Tindouf	0	13	2	3	14	18	15	65
Tipaza	7	21	20	58	61	36	14	217
Tissemsilt	3	12	3	1	11	19	13	62
Tizi Ouzou	27	99	45	65	464	27	48	775
Tlemcen	3	20	54	52	66	31	18	244
Total	383	1795	2171	3563	3280	1861	1167	14220

Table C.9: Protests by Governorate, Pre- and Post Hirak

Governorate	Before Hirak	During/After Hirak	Difference
Adrar	79	99	20
Ain Defla	158	48	-110
Ain Temouchent	23	52	29
Alger	706	381	-325
Annaba	273	184	-89
Batna	355	134	-221
Bechar	189	55	-134
Bejaia	142	273	131
Biskra	146	87	-59
Blida	213	89	-124
Bordj Bou Arreridj	150	129	-21
Bouira	359	156	-203
Boumerdes	167	74	-93
Chlef	124	82	-42
Constantine	398	167	-231
Djelfa	174	172	-2
El Bayadh	20	103	83
El Oued	110	78	-32
El Tarf	125	102	-23
Ghardaia	24	51	27
Guelma	127	110	-17
Illizi	31	42	11
Jijel	143	199	56
Khenchela	169	148	-21
Laghouat	222	66	-156
Mascara	82	67	-15
Medea	72	68	-4
Mila	127	147	20
Mostaganem	201	158	-43
Msila	280	145	-135
Naama	18	43	25
Oran	416	419	3
Ouargla	252	134	-118
Oum El Bouaghi	145	84	-61
Relizane	192	159	-33
Saida	32	59	27
Setif	396	148	-248
Sidi Bel Abbes	91	167	76
Skikda	204	129	-75
Souk Ahras	41	52	11
Tamanrasset	111	46	-65
Tebessa	123	91	-32
Tiaret	115	135	20
Tindouf	18	47	29
Tipaza	108	109	1
Tissemsilt	19	43	24
Tizi Ouzou	240	535	295
Tlemcen	132	112	-20
Total	8,042	6,178	-1,864

Appendix D. Summary Statistics

Figure D.5: Correlation Plot of Model Variables in Main Data

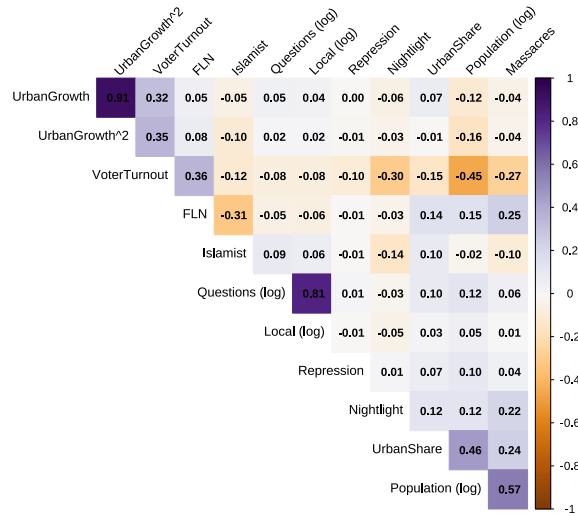


Table D.10: Main Summary Statistics

Variable	Mean	SD	Min	Median	Max
FLN	37.70	19.24	0	33.33	100
Islamist	14.47	13.64	0	14.29	75
LagDV	3.77	12.21	0	1	403
Local	0.18	0.70	0	0	9
Local (log)	0.09	0.31	0	0	2.30
Massacres (log)	0.64	0.94	-1	0.75	2.31
Nightlight	1.55	0.91	0.05	1.50	4.03
Population (log)	13.55	0.53	12.24	13.58	15.28
Protests	3.95	12.28	0	1	403
Questions	0.40	1.33	0	0	22
Questions (log)	0.17	0.45	0	0	3.14
Repression	0.04	0.37	0	0	12
UrbanGrowth	2.87	2.54	-3.10	2.33	19.13
UrbanGrowth Squared	14.70	39.13	0.01	5.43	365.87
UrbanShare	29.03	16.38	6.70	25.52	94.73
UrbanPop	315,628.60	540,058.43	33,372	190,896	4,085,761
VoterTurnout	38.23	12.90	14.49	37.07	83.15
WilayaPop	885,249.81	567,910.39	206,126	793,946	4,316,086

Figure D.6: Correlation Plot of Model Variables in Pre-Hirak Subset

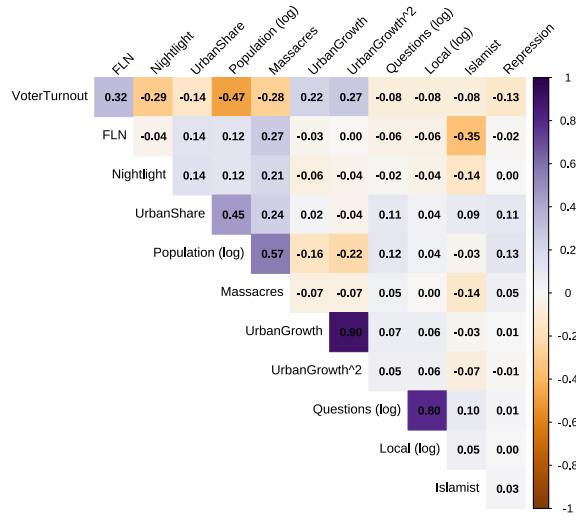


Table D.11: Pre-Hirak Subset Summary Statistics

Variable	Mean	SD	Min	Median	Max
FLN	39.89	20.01	0	40	100
Islamist	13.79	14.12	0	14.29	75
LagDV	3.36	10.42	0	1	156
Local	0.17	0.70	0	0	9
Local (log)	0.09	0.31	0	0	2.30
Massacres (log)	0.64	0.94	-1	0.75	2.31
Nightlight	1.55	0.89	0.05	1.49	3.78
Population (log)	13.52	0.53	12.24	13.57	15.19
Protests	3.44	10.46	0	1	156
Questions	0.40	1.36	0	0	22
Questions (log)	0.17	0.46	0	0	3.14
Repression	1.93	9.45	0	0	154
UrbanGrowth	2.95	2.47	-3.10	2.51	17.36
UrbanGrowth Squared	14.81	33.12	0.01	6.50	301.53
UrbanShare	28.95	16.44	6.70	25.35	94.73
UrbanPop	305,660.33	517,495.53	33,372	187,217	3,756,309
VoterTurnout	41.24	13.06	14.49	41.62	83.15
WilayaPop	863,180.90	545,149.44	206,126	785,489	3,968,686

Summary statistics for subset used in [Table E.15](#).

Figure D.7: Correlation Plot of Model Variables in Pre-Covid Subset

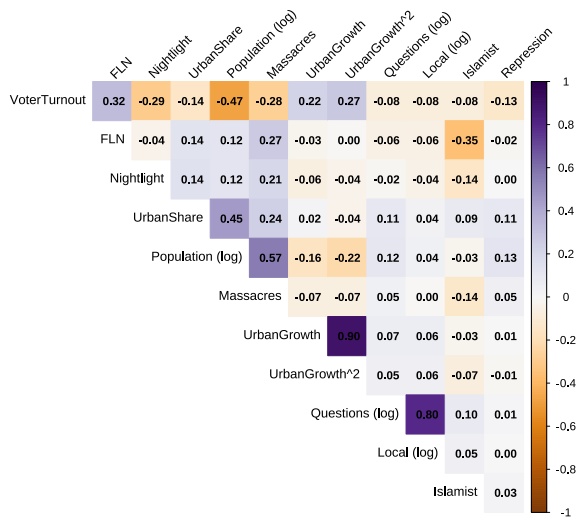


Table D.12: Pre-Covid Subset Summary Statistics

Variable	Mean	SD	Min	Median	Max
FLN	38.62	19.60	0	37.50	100
Hirak	0.19354839	0.3951454	0	0	1
Islamist	14.18	13.85	0	14.29	75
LagDV	3.97	13.07	0	1	403
Local	0.17	0.68	0	0	9
Local (log)	0.09	0.30	0	0	2.30
Massacres (log)	0.64	0.94	-1	0.75	2.31
Nightlight	1.56	0.90	0.05	1.50	3.78
Population (log)	13.53	0.53	12.24	13.57	15.24
Protests	4.02	13.07	0	1	403
Questions	0.38	1.31	0	0	22
Questions (log)	0.17	0.45	0	0	3.14
Repression	2.01	11.88	0	0	402
UrbanGrowth	2.82	2.49	-3.10	2.31	18.04
UrbanGrowth Squared	14.15	35.37	0.01	5.34	325.61
UrbanShare	28.98	16.41	6.70	25.35	94.73
UrbanPop	310,227.55	527,804.57	33,372	189,272	3,914,489
VoterTurnout	39.49	13.05	14.49	39.42	83.15
WilayaPop	873,465.17	555,523.72	206,126	785,489	4,135,207

Summary statistics for subset used in [Table E.17](#).

Appendix E. Alternative Explanations

Table E.13: Main Models with Islamist Controls

	Dependent variable: Monthly Governorate Protest Count							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Questions (log)	-0.09 (0.06)	-0.08 (0.06)			-0.09 (0.06)	-0.08 (0.06)		
Local (log)			-0.17** (0.08)	-0.14* (0.08)			-0.18** (0.07)	-0.16** (0.07)
UrbanGrowth	-0.03 (0.02)	-0.16*** (0.04)	-0.03 (0.02)	-0.16*** (0.04)	-0.03 (0.02)	-0.16*** (0.04)	-0.03 (0.02)	-0.16*** (0.04)
UrbanGrowth Squared		0.01*** (0.002)		0.01*** (0.002)		0.01*** (0.002)		0.01*** (0.002)
Questions (log)*UrbanGrowth					-0.01 (0.05)	-0.003 (0.04)		
Local (log)*UrbanGrowth							0.03 (0.05)	0.04 (0.05)
UrbanShare	0.002 (0.003)	0.004 (0.003)	0.002 (0.003)	0.004 (0.003)	0.002 (0.003)	0.004 (0.003)	0.002 (0.003)	0.004 (0.003)
Population (log)	0.60*** (0.12)	0.52*** (0.12)	0.60*** (0.12)	0.52*** (0.12)	0.60*** (0.12)	0.52*** (0.12)	0.61*** (0.12)	0.53*** (0.12)
Nightlight	-0.06 (0.06)	-0.09 (0.06)	-0.06 (0.06)	-0.09 (0.06)	-0.06 (0.06)	-0.09 (0.06)	-0.06 (0.06)	-0.09 (0.06)
VoterTurnout	-0.03*** (0.004)	-0.03*** (0.004)	-0.03*** (0.004)	-0.03*** (0.004)	-0.03*** (0.004)	-0.03*** (0.004)	-0.03*** (0.004)	-0.03*** (0.004)
FLN	-0.003 (0.003)	-0.003 (0.002)	-0.003 (0.003)	-0.003 (0.002)	-0.003 (0.003)	-0.003 (0.002)	-0.003 (0.003)	-0.003 (0.002)
LagDV	0.04*** (0.002)	0.04*** (0.002)	0.04*** (0.002)	0.03*** (0.002)	0.04*** (0.002)	0.04*** (0.002)	0.04*** (0.002)	0.03*** (0.002)
Hirak	0.37*** (0.13)	0.31** (0.13)	0.38*** (0.13)	0.32** (0.13)	0.37*** (0.13)	0.31** (0.13)	0.38*** (0.13)	0.32** (0.13)
Islamist	-0.01*** (0.003)	-0.01*** (0.003)	-0.01*** (0.003)	-0.01*** (0.003)	-0.01*** (0.003)	-0.01*** (0.003)	-0.01*** (0.003)	-0.01*** (0.003)
Constant	-5.62*** (1.64)	-4.09** (1.67)	-5.62*** (1.64)	-4.10** (1.66)	-5.68*** (1.64)	-4.42*** (1.67)	-5.84*** (1.64)	-4.56*** (1.67)
Month Fixed Effects	X	X	X	X	X	X	X	X
Region Fixed Effects	X	X	X	X	X	X	X	X
Observations	3,375	3,375	3,375	3,375	3,375	3,375	3,375	3,375
AIC	14,692.348	14,671.516	14,670.610	14,690.980	14,694.077	14,673.502	14,691.915	14,670.937
Log Likelihood	-7,315.17	-7,303.76	-7,303.31	-7,314.49	-7,315.04	-7,303.75	-7,313.96	-7,302.47

Notes: *p<0.1; **p<0.05; ***p<0.01.

Variables included in the interaction models are centered.

Standard errors clustered by governorate and robust using 'HC1.'

Table E.14: Main Models with Repression Controls

	Dependent variable: Monthly Governorate Protest Count							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Questions (log)	-0.11*	-0.10			-0.11*	-0.10		
	(0.06)	(0.06)			(0.06)	(0.06)		
Local (log)			-0.17**	-0.14			-0.18**	-0.16**
			(0.09)	(0.09)			(0.08)	(0.08)
UrbanGrowth	-0.03	-0.18***	-0.03	-0.18***	-0.03	-0.18***	-0.03	-0.18***
	(0.02)	(0.04)	(0.02)	(0.04)	(0.02)	(0.04)	(0.02)	(0.04)
UrbanGrowth Squared		0.01***		0.01***		0.01***		0.01***
		(0.002)		(0.002)		(0.002)		(0.002)
Questions (log)*UrbanGrowth					-0.01	-0.001		
					(0.05)	(0.04)		
Local (log)*UrbanGrowth							0.03	0.04
							(0.06)	(0.05)
UrbanShare	0.0001	0.003	-0.0001	0.003	0.0001	0.003	-0.0002	0.003
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Population (log)	0.70***	0.62***	0.69***	0.62***	0.69***	0.62***	0.70***	0.63***
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Nightlight	-0.04	-0.07	-0.04	-0.07	-0.04	-0.07	-0.03	-0.06
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
VoterTurnout	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
FLN	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
LagDV	0.03***	0.03***	0.03***	0.03***	0.03***	0.03***	0.03***	0.03***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Hirak	0.38***	0.31**	0.39***	0.31**	0.38***	0.31**	0.39***	0.31**
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Repression	0.21***	0.20***	0.21***	0.19***	0.21***	0.20***	0.20***	0.19***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Massacres	-0.20***	-0.23***	-0.20***	-0.23***	-0.20***	-0.23***	-0.20***	-0.23***
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Constant	-6.89***	-5.43***	-6.87***	-5.42***	-6.95***	-5.81***	-7.11***	-5.94***
	(1.79)	(1.81)	(1.79)	(1.81)	(1.79)	(1.81)	(1.79)	(1.81)
Month Fixed Effects	X	X	X	X	X	X	X	X
Region Fixed Effects	X	X	X	X	X	X	X	X
Observations	3,375	3,375	3,375	3,375	3,375	3,375	3,375	3,375
AIC	14,697.125	14,669.242	14,669.119	14,696.620	14,698.904	14,671.241	14,697.392	14,669.148
Log Likelihood	-7,316.56	-7,301.62	-7,301.56	-7,316.31	-7,316.45	-7,301.62	-7,315.70	-7,300.57

Notes: *p<0.1; **p<0.05; ***p<0.01.

Variables included in the interaction models are centered.

Standard errors clustered by governorate and robust using 'HC1.'

Table E.15: Pre-Hirak Models

	Dependent variable: Monthly Governorate Protest Count							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Questions (log)	-0.19** (0.08)	-0.19** (0.08)			-0.19** (0.08)	-0.19** (0.08)		
Local (log)			-0.21* (0.12)	-0.21* (0.12)			-0.26** (0.11)	-0.25** (0.11)
UrbanGrowth	-0.07*** (0.03)	-0.14*** (0.03)	-0.07*** (0.03)	-0.14*** (0.03)	-0.07*** (0.03)	-0.14*** (0.04)	-0.08*** (0.02)	-0.14*** (0.03)
UrbanGrowth Squared		0.01*** (0.003)		0.01*** (0.002)		0.01** (0.003)		0.01** (0.003)
Questions (log)*UrbanGrowth					0.01 (0.06)	0.002 (0.05)		
Local (log)*UrbanGrowth							0.07 (0.05)	0.06 (0.05)
UrbanShare	0.01** (0.003)	0.01** (0.003)	0.01* (0.003)	0.01** (0.003)	0.01** (0.003)	0.01** (0.003)	0.01* (0.003)	0.01** (0.003)
Population (log)	0.56*** (0.13)	0.54*** (0.13)	0.55*** (0.13)	0.53*** (0.13)	0.56*** (0.13)	0.54*** (0.13)	0.57*** (0.13)	0.54*** (0.13)
Nightlight	-0.03 (0.06)	-0.04 (0.06)	-0.02 (0.06)	-0.04 (0.06)	-0.03 (0.06)	-0.04 (0.06)	-0.02 (0.06)	-0.03 (0.06)
VoterTurnout	-0.03*** (0.005)	-0.03*** (0.005)	-0.03*** (0.005)	-0.03*** (0.005)	-0.03*** (0.005)	-0.03*** (0.005)	-0.03*** (0.005)	-0.03*** (0.005)
FLN	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)
LagDV	0.05*** (0.003)	0.05*** (0.003)	0.05*** (0.003)	0.05*** (0.003)	0.05*** (0.003)	0.05*** (0.003)	0.05*** (0.003)	0.05*** (0.003)
Constant	-5.61*** (1.87)	-5.13*** (1.88)	-5.56*** (1.87)	-5.09*** (1.89)	-5.86*** (1.89)	-5.48*** (1.90)	-5.97*** (1.90)	-5.61*** (1.91)
Month Fixed Effects	X	X	X	X	X	X	X	X
Region Fixed Effects	X	X	X	X	X	X	X	X
Observations	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250
AIC	9,065.747	9,062.988	9,067.854	9,065.166	9,067.646	9,064.983	9,066.294	9,064.463
Log Likelihood	-4,503.87	-4,501.49	-4,504.93	-4,502.58	-4,503.82	-4,501.49	-4,503.15	-4,501.23

Notes: *p<0.1; **p<0.05; ***p<0.01.

Variables included in the interaction models are centered.

Standard errors clustered by governorate and robust using 'HC1.'

Table E.16: Main Models with COVID Control

	Dependent variable: Monthly Governorate Protest Count							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Questions (log)	-0.17*** (0.06)	-0.15** (0.06)		-0.15** (0.06)	-0.17*** (0.06)	-0.15** (0.06)		
Local (log)			-0.23*** (0.09)				-0.24*** (0.08)	-0.21*** (0.08)
UrbanGrowth	-0.03 (0.02)	-0.19*** (0.04)	-0.03 (0.02)	-0.19*** (0.04)	-0.03 (0.02)	-0.19*** (0.04)	-0.03 (0.02)	-0.19*** (0.04)
UrbanGrowth Squared		0.01*** (0.002)		0.01*** (0.002)		0.01*** (0.002)		0.01*** (0.002)
Questions (log)*UrbanGrowth					-0.01 (0.05)	0.001 (0.04)		
Local (log)*UrbanGrowth							0.03 (0.06)	0.04 (0.05)
UrbanShare	0.0000 (0.003)	0.003 (0.003)	-0.0003 (0.003)	0.003 (0.003)	0.0001 (0.003)	0.003 (0.003)	-0.0004 (0.003)	0.003 (0.003)
Population (log)	0.58*** (0.12)	0.47*** (0.12)	0.57*** (0.12)	0.47*** (0.12)	0.58*** (0.12)	0.47*** (0.12)	0.58*** (0.12)	0.48*** (0.12)
Nightlight	-0.05 (0.06)	-0.09 (0.06)	-0.05 (0.06)	-0.09 (0.06)	-0.05 (0.06)	-0.09 (0.06)	-0.05 (0.06)	-0.08 (0.06)
VoterTurnout	-0.03*** (0.004)	-0.04*** (0.004)	-0.04*** (0.004)	-0.04*** (0.004)	-0.04*** (0.004)	-0.04*** (0.004)	-0.04*** (0.004)	-0.04*** (0.004)
FLN	-0.0000 (0.003)	0.0001 (0.003)	0.0001 (0.003)	0.0001 (0.003)	-0.0001 (0.003)	0.0001 (0.003)	0.0001 (0.003)	0.0002 (0.003)
LagDV	0.03*** (0.002)	0.03*** (0.002)	0.03*** (0.002)	0.03*** (0.002)	0.03*** (0.002)	0.03*** (0.002)	0.03*** (0.002)	0.03*** (0.002)
COVID	-1.23*** (0.37)	-1.23*** (0.37)	-1.22*** (0.37)	-1.23*** (0.37)	-1.23*** (0.37)	-1.23*** (0.37)	-1.22*** (0.37)	-1.22*** (0.37)
Constant	-5.15*** (1.76)	-3.26* (1.75)	-5.10*** (1.76)	-3.26* (1.75)	-5.21*** (1.75)	-3.66** (1.75)	-5.31*** (1.75)	-3.74** (1.75)
Month Fixed Effects	X	X	X	X	X	X	X	X
Region Fixed Effects	X	X	X	X	X	X	X	X
Observations	3,375	3,375	3,375	3,375	3,375	3,375	3,375	3,375
AIC	14,681.587	14,646.723	14,647.610	14,682.204	14,683.419	14,648.721	14,683.159	14,647.842
Log Likelihood	-7,310.79	-7,292.36	-7,292.80	-7,311.10	-7,310.71	-7,292.36	-7,310.58	-7,291.92

Notes: *p<0.1; **p<0.05; ***p<0.01.

Variables included in the interaction models are centered.

Standard errors clustered by governorate and robust using 'HC1.'

Table E.17: Pre-COVID Models

	Dependent variable: Monthly Governorate Protest Count							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Questions (log)	-0.14** (0.07)	-0.14** (0.07)			-0.15** (0.07)	-0.14** (0.07)		
Local (log)			-0.16 (0.10)	-0.15 (0.10)			-0.18** (0.09)	-0.17* (0.09)
UrbanGrowth	-0.06** (0.03)	-0.16*** (0.04)	-0.06** (0.03)	-0.16*** (0.04)	-0.06** (0.03)	-0.16*** (0.04)	-0.06** (0.03)	-0.16*** (0.04)
UrbanGrowth Squared		0.01*** (0.003)		0.01*** (0.003)		0.01*** (0.003)		0.01*** (0.003)
Questions (log)*UrbanGrowth					0.01 (0.05)	0.01 (0.04)		
Local (log)*UrbanGrowth							0.06 (0.05)	0.05 (0.05)
UrbanShare	0.004 (0.003)	0.01* (0.003)	0.004 (0.003)	0.01* (0.003)	0.004 (0.003)	0.01* (0.003)	0.003 (0.003)	0.01 (0.003)
Population (log)	0.62*** (0.13)	0.56*** (0.13)	0.61*** (0.13)	0.55*** (0.13)	0.62*** (0.13)	0.56*** (0.13)	0.62*** (0.13)	0.57*** (0.13)
Nightlight	-0.06 (0.07)	-0.08 (0.07)	-0.06 (0.07)	-0.08 (0.07)	-0.06 (0.06)	-0.08 (0.07)	-0.05 (0.07)	-0.07 (0.07)
VoterTurnout	-0.03*** (0.005)	-0.03*** (0.005)	-0.03*** (0.005)	-0.03*** (0.005)	-0.03*** (0.005)	-0.03*** (0.005)	-0.03*** (0.005)	-0.03*** (0.005)
FLN	-0.001 (0.003)	-0.001 (0.003)	-0.001 (0.003)	-0.001 (0.003)	-0.001 (0.003)	-0.001 (0.003)	-0.001 (0.003)	-0.001 (0.003)
LagDV	0.03*** (0.002)	0.03*** (0.002)	0.03*** (0.002)	0.03*** (0.002)	0.03*** (0.002)	0.03*** (0.002)	0.03*** (0.002)	0.03*** (0.002)
Hirak	0.39*** (0.13)	0.33** (0.13)	0.40*** (0.13)	0.34** (0.13)	0.39*** (0.13)	0.33** (0.13)	0.40*** (0.13)	0.34** (0.13)
Constant	-6.07*** (1.87)	-4.96*** (1.87)	-6.00*** (1.87)	-4.90*** (1.87)	-6.29*** (1.87)	-5.34*** (1.87)	-6.35*** (1.88)	-5.42*** (1.88)
Month Fixed Effects	X	X	X	X	X	X	X	X
Region Fixed Effects	X	X	X	X	X	X	X	X
Observations	2,970	2,970	2,970	2,970	2,970	2,970	2,970	2,970
AIC	11,968.476	11,958.374	11,970.186	11,960.271	11,970.170	11,960.255	11,968.929	11,959.656
Log Likelihood	-5,954.24	-5,948.19	-5,955.09	-5,949.14	-5,954.09	-5,948.13	-5,953.46	-5,947.83

Notes: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Variables included in the interaction models are centered.

Standard errors clustered by governorate and robust using 'HC1.'

Appendix F. Other Model Specifications

Table F.18: Main Models with Time Lags

	Dependent variable: Monthly Governorate Protest Count					
	(1)	(2)	(3)	(4)	(5)	(6)
Questions (log) _{t-1}	-0.21** (0.09)					
Questions (log) _{t-2}		-0.27*** (0.06)				
Questions (log) _{t-5}			-0.01 (0.07)			
Local (log) _{t-1}				-0.34*** (0.12)		
Local (log) _{t-2}					-0.32*** (0.09)	
Local (log) _{t-5}						-0.03 (0.10)
UrbanGrowth	-0.16*** (0.04)	-0.16*** (0.04)	-0.17*** (0.04)	-0.16*** (0.04)	-0.16*** (0.04)	-0.17*** (0.04)
UrbanGrowth Squared	0.01*** (0.002)	0.01*** (0.002)	0.01*** (0.002)	0.01*** (0.002)	0.01*** (0.002)	0.01*** (0.002)
UrbanShare	0.003 (0.003)	0.003 (0.003)	0.003 (0.003)	0.003 (0.003)	0.003 (0.003)	0.003 (0.003)
Population (log)	0.52*** (0.11)	0.52*** (0.11)	0.48*** (0.12)	0.50*** (0.11)	0.51*** (0.11)	0.48*** (0.12)
Nightlight	-0.08 (0.05)	-0.07 (0.06)	-0.07 (0.06)	-0.08 (0.06)	-0.07 (0.06)	-0.07 (0.06)
VoterTurnout	-0.03*** (0.004)	-0.03*** (0.004)	-0.03*** (0.004)	-0.03*** (0.004)	-0.03*** (0.004)	-0.03*** (0.004)
FLN	-0.0003 (0.002)	0.0001 (0.002)	0.0000 (0.002)	0.0001 (0.002)	0.0002 (0.002)	0.0001 (0.002)
LagDV	0.04*** (0.002)	0.03*** (0.002)	0.04*** (0.002)	0.04*** (0.002)	0.03*** (0.002)	0.04*** (0.002)
Hirak	0.34** (0.14)	0.35*** (0.13)	0.33** (0.14)	0.32** (0.14)	0.34** (0.14)	0.33** (0.14)
Constant	-4.32*** (1.63)	-4.36*** (1.63)	-3.87** (1.67)	-4.05** (1.64)	-4.17** (1.65)	-3.87** (1.67)
Month Fixed Effects	X	X	X	X	X	X
Region Fixed Effects	X	X	X	X	X	X
Observations	3,375	3,375	3,375	3,375	3,375	3,375
AIC	14,678.742	14,672.438	14,691.027	14,676.929	14,678.349	14,690.931
Log Likelihood	-7,308.37	-7,305.22	-7,314.51	-7,307.46	-7,308.17	-7,314.47

Notes: *p<0.1; **p<0.05; ***p<0.01.

Variables included in the interaction models are centered.

Standard errors clustered by governorate and robust using 'HC1.'

Appendix G. Batna and Khenchela Overview

Table G.19: Summary of Variables for Khenchela and Batna

Variable	Khenchela	Batna
Program Territory	Hauts-Plateaux-Est	Hauts-Plateaux-Est
UrbanShare 2015	27.04	29.83
UrbanShare 2020	27.23	28.07
Population 2015	428,122	1,271,492
Population 2020	466,865	1,447,918
Number of Cities	1	3
Parliamentary Questions (Local Questions)		
I. 7 th Legislature, (01/2015 - 05/2017)	0	2 (0)
II. 8 th Legislature, Pre-Hirak (06/2017 - 02/2019)	2 (2)	34 (20)
III. 8 th Legislature, Hirak (02/2019 - 03/2021)	0	5 (2)
Total	2 (2)	41 (22)
Protest Count (per 10k capita)		
I. 7 th Legislature, (01/2015 - 05/2017)	72 (1.45)	199 (1.40)
II. 8 th Legislature, Pre-Hirak (06/2017 - 02/2019)	97 (1.95)	156 (1.10)
Change I to II	25 (0.50)	-35 (-0.25)
III. 8 th Legislature, Hirak (02/2019 - 03/2021)	148 (2.98)	134 (0.94)
Change II to III	51 (1.03)	-22 (-0.15)
Total	317 (6.39)	489 (3.44)